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Lafayette Benedict Mendel

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Personality in the Laboratory

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Gas—Latest Concept of Warfare

The CHEMIST

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HOWARD S. NEIMAN, *Secretary*
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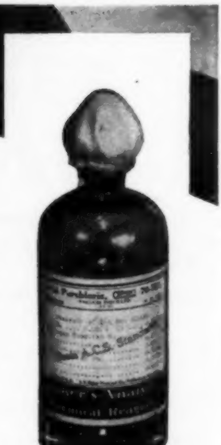


EDITORIALS BY COUNCILORS—IV

Forty-Five and No Job

By Frank G. Breyer, F.A.I.C.

The Chairman of The Unemployment Committee for Metropolitan New York diagnoses the case of the chemist over forty-five who is out of a job.

MANY lessons have been learned by many people from the depression. Most of these will soon be forgotten. A few are clearly defined. A less number are a sufficiently common and acute experience to move affected groups to action.

Chemists are no exception. They feel that they have learned something from this depression that is peculiar to them as chemists or technical men, as distinct from other groups of men such as doctors, lawyers, merchants, bankers, etc. The question is, "Has any one lesson been sufficiently plain to enough chemists so that something will be done about it?" As chairman of the Committee on Unemployment and Relief for the metropolitan area during the troubled times, I could easily enumerate five important lessons about which a considerable number of chemists would agree that something should be done. That is too many. If we can do something about one problem, namely, that of the man over forty-five years old, it will be about as much as we have a right to hope can be accomplished from the limited coöperative capacity shown by the chemical profession up to this time.

I do not need to tell any of you much about the problem of the man of "forty-five years old and no job." You all know something about it abstractly. Many probably know some individuals who have faced

or are now facing the problems of that dilemma. Few have had occasion to try to get the problem in full perspective. I know that my present picture is not complete, but here it is as I now see it.

Chemists and chemical engineers over forty-five get out of jobs for the following reasons in the order of their importance.

(1) Ordinary business mortality.

(2) Company politics.

(3) Increasing concentration of the chemical industry in the hands of a limited group of companies.

(4) Pension systems, old-age provisions, and similar activities which make large companies statistically rather than individually minded.

(5) Inflexible mentalities.

(6) Inefficiency.

Of course, these six divisions do not cover the case completely, but I think they do so well enough. You will notice that I put as (5) and (6) in importance the reasons most commonly given for a chemist of forty-five years old being out of a job. They are the reasons most commonly given, but these reasons are easy excuses for some underlying reason which may be classified under the other four or some combination of them. To let a forty-five-year-old man out of a job after he has been in it ten years on the excuse that he is inefficient is not realistic. It did not take ten years to discover his inefficiency. It is an easy excuse to give and the most frequent one because there is no answer to it. Who is to be the judge of inefficiency?

Let us turn back to the foregoing paragraphs and amplify each one in turn. The records of your Unemployment Committee will clearly show that paragraphs one and two are the primary causes for men over forty-five years old being out of jobs. Inefficiency and inflexibility have long before forty-five eliminated the really inflexible and incompetent man. Our registrants over forty-five years old came mostly from men who had their own businesses which had to shut up during the depression; from those who were employed in manufacturing divisions that were cut off, or from those who were thrown overboard when whole research and/or testing laboratories were done away with.

With the psychology that has prevailed during the depression, politics within companies and corporations became over-acute and when one vice-president or another lost out, his whole following went with him.

In a later issue of The Chemist, Mr. Breyer will discuss what can be done about this situation.

In Memoriam

Lafayette Benedict Mendel

A Great American Chemist

IN COMMENTING on the death, on December ninth, of Dr. Lafayette Benedict Mendel, Sterling Professor of Physiological Chemistry at Yale, and Institute Medalist, it seems merely trite to say that the world of science—American chemistry in particular—has lost one of the greatest figures of recent years.

The public press and various scientific journals have duly recorded accounts of his life and his eminent scientific achievements. But no cataloguing of vital statistics and academic honors could possibly convey any suggestion of the human side of this great man, because most of it was of a delicate, elusive quality, which those so blessed usually keep out of print.

Dr. Mendel was a splendid example of the chemist that is much more than just a chemist. In his breadth of cultural and associated knowledge, he reminds us of those famous figures of earlier times, who managed to combine arts and letters and social graces with their scientific attainments. From his high school days, he had an excellent grounding in the classics and literature. With all good humor, he liked to spice his conversation and lectures with appropriate quotations from Latin or Greek, and poke a friendly gibe at the faulty Latin of his learned col-

leagues. He, himself, was a constant reader in many fields; and in his happy home life, he found relaxation and enjoyment in having Mrs. Mendel read to him.

Almost every account of Dr. Mendel's life and work mentions his strong personal influence over those that have been in any way associated with him. One seeks almost in vain for the secret of his influence. Was it his brilliant mind? His kindliness and tact? His gracious adaptability to, and genuine friendly interest in, all kinds of people? Any explanation implies all of these qualities, usually summed up in "his wonderful personality."

If personality is to be defined as "The total of the impressions one makes on others," this, in Dr. Mendel, was something vital, deeply rooted in sterling traits of character. Including his undergraduate days, he spent nearly fifty years at Yale. It means something to be remembered by the faculty patriarchs as the most respectful student that ever trod the campus; and to have it recalled that, in a quarter of a century, he was only once seen to display anger. Although he inspired genuine affection and devotion in his students, he was usually strict with them, tolerating no waste of time or effort, patient but implacable with slipshod thinking or expression. At first, it always seemed as if there could not be any "best time to approach Professor Mendel;" but shrewd students soon learned that if he could be said to have weaker moments, especially in later years, the time to catch him at his softest and mellowest, his most expansive and benign, was just after an operation on a lymphatic fistula.

FOR YOUNGER scientists, Dr. Mendel did much more than will ever be published. Occasionally, by a sharp re-orientation, he brought a student right into the type of work for which he was best suited; and while research problems did conform to the general laboratory program, he always assigned them carefully with the student's own advancement foremost in mind. He was an excellent critic, cautious and keen, but always kindly and constructive. With a passion for accuracy and a rare gift for clarifying thought, he had a fine appreciation of good technical writing and he encouraged the perfecting of this mode of expression in anyone that showed any literary ability whatever. He liked his students to consider him as a *paterfamilias*, and helped them to solve their personal problems as well as those of the laboratory. Through his many wide contacts both in and out of university circles, he often helped to place some deserving chemist in a congenial position which had been waiting for "just the right person."

Dr. Mendel loved the many honors that were accorded him, and any manifestation of personal appreciation, such as the portrait that his students gave him in 1932 when he became sixty, and that "Festschrift" issue (March, 1932) of the *Yale Journal of Biology and Medicine*, which was made up entirely of contributions by prominent former students and dedicated to him. Everything of this kind was accepted with characteristic modesty and simplicity, as for his work, of which he considered himself merely the fortunate instrument. Honors to a colleague, or especially to a former student, made him just as happy, for he found pleasure and satisfaction in contributing toward another's career in constructive work in science.

To Dr. Mendel, work in science set no barriers of age or sex, of nation, race or creed. It was this broad tolerance and his open mind, as well as the breadth of his own knowledge, which made his coöperation so valuable to the John Simon Guggenheim Memorial Foundation. For eight years he served this Foundation, giving prodigally of his time and thoughtful consideration as a member either of the Advisory Board or of the Committee of Selection. He was always receptive to new ideas, and the more unusual the project, particularly in fields outside his own, the keener was his interest. In appraising values, he sought assurance that the work was really worth doing and that the candidate, not only in past accomplishment, but also in promise and in personal characteristics, was truly worthy of the honor.

DR. MENDEL firmly believed in the popularizing of scientific knowledge, but he sincerely deplored the exploitation of science in the public press. In accepting the medal of the Institute, in 1927, the key-note of his address was that the public needed proper perspective on the true value of scientific research, so that they would not be disappointed and disillusioned when and if the results should not be as anticipated. He wanted the public to appreciate scientific research and support it generously, mindful of the oft-repeated fact that a most valuable discovery may come, not as the result of some major study, but as a by-product.

Especially in his own field of nutrition, Dr. Mendel urged the need for sound public information. As a consultant for the food companies, he tried consistently to combat unjustifiable advertising claims; and he did succeed in exploding many inherited fallacies about food combinations and about the relative values of food content. When the merit of his work is fully appreciated, it will undoubtedly be found that in his quiet and persistent, but always constructive efforts—through the

Committee on Foods of the American Medical Association, through his editorials, articles and radio broadcasts—he did more to protect the consumer than could ever be accomplished by the intensive terrorizing and melancholy fanaticism of destructive professional crusaders.

Yale will seem not quite the same without Professor Mendel. It is a tragedy of his last illness, which kept him from all activity for so many months, that after all he had done for it, medical science could do so little for him. But if the person is actually gone, the personality of this beloved educator can never die. More dependably than might occur in children of the blood, his mind, his spirit, is indelibly stamped in the memory—even in the conduct—of those that knew him; and its subtle influence will go on and on, through future generations of teachers and untold numbers of students to whom the name and story of Lafayette Mendel will be but a page in the history of our great American scientists.

FLORENCE E. WALL, F.A.I.C.

Personality in the Laboratory

By Neil F. MacDonald, F.A.I.C.

Personality adjustments should be considered in technical organizations where they are too often ignored.

PERSONALITY and personality adjustments are an extremely important, but frequently overlooked, factor in the success or failure of a chemical laboratory's functioning. Yet in any organization where men are employed, this factor must be considered. If the day were to come when a laboratory staff could be composed of robots, then only could the reaction of one personality to another be ignored.

Whenever two or more people come together, an emotional interaction occurs, just as when two chemical compounds react. Just what this reaction will be depends on the individual personalities of the people concerned and the length of time they are exposed to each other.

A laboratory to function effectively must function as a unit, its work properly integrated by a common desire for efficiency. This efficiency is dependent upon the work of the individual chemists and whether they are working under conditions which are conducive to their interests in

their particular duties. The desire to satisfy self and an immediate superior by the production of any kind of work carries with it a certain emotional appeal and satisfaction. This ability and desire to produce is not a stationary thing, but can and will fluctuate with the temperament of the individual worker. No worker can avoid being influenced by the personalities of the people with whom he works, and by those of the people for whom he works.

The most important single relationship for each worker or staff member is his relationship to his immediate superior, usually a chief chemist. This relationship possesses a characteristic which differs from that between co-workers in one particular—authority. Exercise of and submission to authority has been a source of trouble since time immemorial whenever two people meet and one attempts to dominate the other. Naturally, in any organization employing the services of several workers, there will be some who resist submission to authority.

Intelligence and technical training do not lessen this personality problem, since neither eradicates feelings and patterns of emotional reaction. Most chemists have enjoyed positions of independence and freedom from close supervision by the very nature of their work, particularly if they have had research inclinations. As a group they are actually more likely to resent authority than a less trained person who is accustomed to accept the domination of others and to be subservient. It is common knowledge that there are some individuals who cannot cope with authority, either actively or passively.

ANY organization must have a leader or administrator whose position carries a certain amount of authority over subordinates. The success of the organization will depend on the leader's ability to exercise authority and use it constructively. Rather than enter into a distinctly theoretical discussion of the effect of personality, let us look at two examples of laboratories whose chief chemists have radically different personalities and observe the effect of these personalities upon the laboratories. All of the members of the staff of Laboratory One are civil service employees qualified by technical knowledge and experience. While security of position generally lessens anxiety over possible unemployment and increases the chances of employees giving a maximum of interest and effort to their jobs, there are always some who need the stimulation of uncertainty and competition. A secure position in the form of a civil service appointment becomes a handicap to the development of these individuals, for they may cease to become productive and become

routinized in producing only what is demanded of them. Laboratory One has its quota of this type of employee. Furthermore, civil service makes no distinction between race or creed, so that this group is a fair sampling of an urban middle-class social group, with Protestants, Jews and Catholics; with Whites and Negroes represented, each political, religious and racial group with its own prejudices. Surely, such a group must require the most able leadership if it is to function effectively.

The chief chemist of this laboratory, Mr. A, is a blustering politician of the type so often depicted by cartoonists. He was appointed to the position through political influence and over the heads of men who were in line for the appointment. His lack of technical qualifications is a serious handicap of which he is constantly conscious, and which he attempts to cover by a ruthlessly domineering, over-critical attitude. To a favored few he is patronizing, to the others supercilious and consistently discourteous. The ordinary incidents of laboratory routine with its occasional delays in reports and variations in results call forth infantile emotional outbursts of anger and unwarranted criticism, with profane and vulgar vocalization. The peaceful moments in the laboratory are but the warning of the storm. He does not command the respect of his staff. No member of the staff will consult him willingly on any question for fear of being exposed to discourteous and sarcastic remarks.

There is no incentive to produce good work, and the general interest of the group might be measured by the intensity of the rush for the time-clock at five P. M. No determinations are started which are not certain to be completed well before quitting time. These chemists make no attempts to do independent work, for not only is the incentive to co-operate with the Chief lacking, but there is also the feeling that the Chief would appropriate any credit which might be due. Individually and collectively, the staff voices its hostility against the Chief, a hostility that is further evidenced by the production of a minimum amount of work, not necessarily a result of conscious unwillingness, as much as it is the result of inability to clear the minds sufficiently of antagonism and resentment to enable them to concentrate on the problem at hand. The general antagonism and suspicion of the Chief are reflected in the attitude of the staff to each other. As the Chief distrusts them, so they distrust each other, and relieve their pent-up antagonism by mutual friction. Mr. A's insecurity is further shown by his unwillingness to delegate responsibility to the proper subordinates. The original initiative of his workers has been stifled by being denied a due share of responsibility.

The total situation of disorganization and inefficiency in this laboratory is the direct result of the warped personality of its chief chemist. Any worker going into this atmosphere, no matter how well adjusted he might be, would be certain to react to this chief chemist in the same way as do the present workers.

LABORATORY TWO is also made up of civil service appointees, but the group is a more homogeneous one. It is evident that the group was selected with some regard for personality requirements.

Mr. B, the chief chemist, is a quiet, deliberate man with all the characteristics implied by the term "gentleman." He is a keen, intelligent, well-trained chemist, completely qualified for his position. Secure in this knowledge, he knows no need to impress the staff with his importance. He is unafraid of admitting his limitations and when confronted with new or unfamiliar determinations, he willingly works side by side with his chemists as one of them, coöperating with them in a common interest. As a result, members of the staff feel free to consult him and to profit by his wider experience. If an unknown material is present in a sample and interferes with a determination, he will discuss the problem with the chemist in a mutual attempt to uncover the difficulty.

The workers respect him as a man and a chief on whom they can depend at all times for assistance, reassurance and encouragement. His interest in them is reflected in their own interest in their work. If any staff member feels that a new method may work more advantageously, he is encouraged to experiment and perfect the method, if it appears to the chief to be feasible. But if the chief feels that it is without merit, he will tactfully explain the disadvantages without making the suggestor feel that he has erred. In pursuing original work, each chemist is confident that he will receive the full credit due him. The interest of these men at their work is often shown by their disregard for the closing time of the laboratory. They feel it quite normal to remain late to complete work which might have been delayed until another day had they been interested only in filling the time requirements of the job. On the other hand, those who have finished their work welcome the chance to congregate around the desk and informally discuss their work or current literature and the application of new methods to the laboratory work.

The basic personality of this emotionally, as well as intellectually, mature chief has secured the complete coöperation and interest of each and every chemist, resulting in a closely knit organization, which is productive of the maximum accurate work. One might take the most resentful and maladjusted worker from Laboratory One and place him in

this atmosphere, and he would in all probability become a valuable member of the staff with the same sense of responsibility and coöperativeness that these workers in Laboratory Two show.

A laboratory which is to function as a unit must be under the leadership and supervision of a man capable of recognizing not only the individual technical and administrative functions of the organization but also the human element that is the mainspring governing the production of each individual employee.

As a key person, the chief chemist should be the type of man who can stimulate his staff, encourage it to assume responsibility, win coöperation, and secure confidence. He should be able to encourage his subordinates to make good personality adjustments to each other and to him. He should be the type of person whom his staff can respect for ability, knowledge, and as a man. Personality requirements are as vital as training. An individual might be thoroughly trained in theory and in practice and yet fail woefully because of personality faults. If he is a man capable of understanding the human faults of those who work under him, he will not only avoid antagonistic attitudes, but actually create a wholesome respect and willingness, even enthusiasm, to work with him and for him.

This question of the effect of personality on the efficiency of an organization is receiving close study by many of the more progressive corporations, among them, R. H. Macy Company and the Dennison Manufacturing Company, which are making actual use of the results of their personality analyses in the choice and promotion of their employees. Their experiences have been so favorable that it behooves executives to apply their theories to some of the technical fields where education and training, or even length of service, have long been the sole criteria by which men have been chosen for responsible positions.

Chemists' Unemployment Committee

THE Committee on Unemployment and Relief for Chemists and Chemical Engineers, which is sponsored by twelve chemical or engineering societies, including the AMERICAN INSTITUTE OF CHEMISTS, reports that since 1931, 2,142 qualified chemists and chemical engineers have registered. The Committee's active file, as of November 1, 1935, was 485.

During the coming year, the Committee will devote more attention to those problems of the unemployed which are the result of fundamental readjustments in requirements for men in industry.

Gas—The Latest Concept of Warfare

By Lonnie C. Elmore, A.A.I.C.

A lieutenant of the Officers' Reserve Corps, United States Army, defends the chemists' contribution to warfare as humane compared with other fighting methods.

SINCE the first effective use of chemicals by the Germans on April 22, 1915, a great deal of publicity and criticism has been directed toward this method of warfare. This publicity and criticism will no doubt continue until the public has been convinced that chemical warfare is not horrible and inhumane, but on the contrary, is the most efficient agency for effecting casualties while also being the most humane method of warfare ever used on a battlefield.

To some people, the mention of the use of gas brings horrible, imaginary pictures of the after-effects of gas poisoning on the human body. Criticism of the deleterious, physical effects of this method of warfare is exaggerated and unfounded. Warfare gases have been blamed with more injustice than has any weapon known to warfare. Almost every conceivable ailment known to the human body has been attributed to the effect of these gases. This is due to the fact that gas warfare is a new concept. Now that a careful study has been made it has been proven that gas, generally, does not cause permanent disabilities, and there is no direct proof that gas causes tuberculosis.

No doubt many soldiers who served during the great struggle now blame gas for their present disabilities, but there are also many similar cases who cannot attribute their injuries to gas, because they never came into contact with it during their service in the army. Those who left comfortable homes had to adhere to new regulations upon entering the army—a method of living entirely different from that to which they were accustomed. This change in their mode of living necessarily had a great physiological effect upon them. Then, too, the hardships and exposures to which soldiers are subjected make them susceptible to prevalent diseases, such as the influenza epidemic of 1918 with its 800,000 hospital cases.

The following analysis of information supplied by the Ministry of Pensions shows the general character of the more protracted disabilities observed after gas poisoning:

"During the twelve-month period, August, 1919 to August, 1920, the

resurvey boards made 26,156 examinations of cases of gas poisoning—many of the men were examined more than once during that period—and the total number of individual cases examined is calculated to have been about 22,000. But of this number 3,136 were classed as 'nil' since they showed no disability, leaving the total number of pensioners as about 19,000. The known total of gas casualties in the British Army is 180,983. But many of these men were gassed more than once, on each of which occasions a fresh casualty would be reported. It is impossible to determine the proportion of these, and the number of survivors from the early chlorine attacks is also unknown. As a reasonable approximation, one may accept 150,000 as the total number of individuals surviving after gas poisoning, many of whom were, of course, very mild cases.

"The number receiving disability pensions in 1920, two or more years after gassing, was approximately 19,000; that is, about twelve per cent of the total gas casualties. Gas poisoning was responsible actually for two per cent of all the disabilities after the war, 35 per cent of all pensioners being classified as suffering from wounds and injuries and 65 per cent as suffering from diseases."

OF THE opinion expressed in the literature concerning the relationship between tuberculosis and gassing, the overwhelming majority is to the effect that such a connection is remote. Elliot and Tovall, in 1916, reported tuberculosis, after gassing, in three Canadian soldiers with a previous history of tuberculosis which had been arrested for some years. However, in 1917, Elliot, who had a large experience with returned soldiers, stated: "It is gratifying to be able to state that gas does not seem to have stirred up tuberculosis to any great extent. It was feared that most of the cases would develop into tuberculosis, but very few have." Again, in 1919, Elliot stated that among soldiers with tuberculosis in the Canadian Army he had found only a few who had become casualties through being gassed. In 1922, Meade summarized the histories of over 3,000 persons examined by the War Risk Insurance Bureau, in Kansas City. As a result of his survey, he issued the statement: "I now believe that we can say to the public upon the best authority (which is based upon universal observation) that a man is no more liable to tuberculosis as the result of gassing than is a man who has never been gassed."

The following paragraph by Meade may also be quoted: "I am convinced that all chemical irritants activate and produce certain pathologic changes in the lungs, but I do not believe that such irritants are responsible for tuberculosis and will call attention to Major Gerald B. Webb's

article upon the effects of inhaling cigarette smoke in tuberculosis. He concludes that the inhaling of tobacco is a protective agent against tuberculosis and cites his examination of recruits. There was a much greater number of non-smokers discharged on account of tuberculosis than there were of smokers, and there were fewer cases of tuberculosis among cigarette smokers than among pipe and cigar smokers, showing that the inhaling of the smoke caused an irritation which gave some degree of protection."

Cole, after four years' experience in Veterans' Bureau work, tuberculosis sanitoriums and private practice with soldiers who had been gassed, concludes:

"War gassing has little to do with the development of later pulmonary tuberculosis. The gas patient who later develops tuberculosis usually runs a less severe course with less tendency to serious complications than the non-gassed man."

In 1919, Morris stated that in examining old cases of persons who had been gassed, repeated examinations of the sputum had failed to reveal tubercular bacilli. In 1919, Meakins and Priestly followed seven hundred consecutive cases of gas poisoning through all obtainable records. There was not one case of proven pulmonary tuberculosis in the series. In 1919, Dennis examined by X-ray the chests of a large number of gassed patients, but did not find any cases of tuberculosis. In 1919, Cowen reported a study of "upward of 150" cases showing the after-effects of gas poisoning, and stated that the sputum of the great majority of patients was examined, often on several occasions, but in no instance was tubercle bacilli detected.

In 1919, Berghoff served on the Camp Grant Board for the study of the after-effects of war gases on soldiers applying for pensions and gave the following as his conclusions with regard to tuberculosis: "Gas victims, irrespective of the type of gas and severity of attack sustained, showed no marked predisposition toward active pulmonary tuberculosis or toward the reactivation of a healed or quiescent pulmonary wound." In 1919, Miller made the following statement: "The infrequent development of pulmonary tuberculosis as the result of exposure to poisonous and irritating gases and chest wounds raises the question as to whether we have not in the past over-emphasized the dangers of mechanical irritation and trauma as exciting causes of active tuberculosis."

SANDALL, a medical officer of the British Government, stated in 1922 that in Oxford area there had not been an instance of tuberculosis in the men pensioned because they had been gassed. On page 103

of the Surgeon General's Report for 1920 there is found the following paragraph: "One hundred and seventy-three cases of tuberculosis occurred during 1918 among the 70,552 men who had been gassed in action. Of this number 78 had been gassed by gas of a kind not specified; 8 by chlorine; 65 by mustard; and 22 by phosgene. The number of cases of tuberculosis for each 1,000 men gassed was 2.45. Since the annual rate of occurrence for tuberculosis among enlisted men serving in France in 1918 was 3.50, and in 1919, 4.30 per 1,000, it would seem to be apparent that tuberculosis did not occur any more frequently among the soldiers who had been gassed than among those who had not been." In brief, it shows that in the year 1918 there were one and one-half times as many cases of tuberculosis per 1,000 among all troops in France as there were among those gassed, and in 1919, there were more than one and three-fourths times as many tuberculosis cases per 1,000 among all troops as there were among the gassed troops. This means that if gassing were not an actual prevention of tuberculosis, the small percentage of tubercular cases among the gassed can only be accounted for by the care those patients received in hospitals.

The Most Humane Method

Much may be said about whether the use of chemicals in warfare is inhumane. At the Hague Convention of 1899, it was forbidden, and declaration eleven of the Convention was: "The Contracting Powers agree to abstain from the use of projectiles, the sole object of which is the diffusion of asphyxiating deleterious gas." Our own representative, Admiral Mahon, was the only dissenting voice against abolishing this method of warfare. He voiced his objections as follows:

"The objection that a machine of war is barbarous has always been raised against new weapons, which were nevertheless finally adopted. In the middle ages, it was firearms which were denounced as cruel. Later, shells, and more recently torpedoes have been denounced. It seems to me that it cannot be proved that shells with asphyxiating gases are inhumane or unnecessarily cruel machines of war, and that they cannot produce decisive results.

"I represent a people that is animated by a lively desire to make warfare more humane, but which nevertheless may find itself forced to wage war; therefore, it is a question of not depriving itself through hastily adopted resolutions of means of which it could later avail itself with good results." Admiral Mahon held that it was illogical, and most demonstrably inhumane, to be tender about asphyxiating men with gas, when all are prepared to admit that it was allowable to blow the bottom out

of an ironclad at midnight, throwing four or five hundred men into the sea, to be choked by water, with scarcely the remotest chance of escape. If, and when, a shell emitting asphyxiating gases alone has been successfully produced, then, and not before, men will be able to vote intelligently on the subject.

MUCH has been written about the horrors of gas and the disabilities following gas casualties. No one will deny the fact that the use of chemicals is not humane, but neither is any other method of warfare. It is no more inhumane to choke a man to death by the use of gas or to injure him by this method, than it is to rend him limb from limb by high explosives, destroy his hearing and seeing, and leave him a mangled form beyond recognition as the normal man he once was. Nothing is more horrible than men disemboweled by high explosives, by bayonets and by bullets; than men with arms blown away, legs torn off, eyes gouged out, and faces torn to mere fleshy shreds; nor is there greater suffering than that caused by shell fragments, shrapnel, bullets and bayonets, when vital parts of the body are cut and jagged nerves torn; than the helpless and crippled, the human wreckage left by these conventional means of war. Gas causes none of these effects.

History shows that as war methods have progressed in efficiency, as the result of the application of science, so has the death rate decreased. Gas is the latest contribution to the science of war. The most humane method of warfare is that causing the least suffering on the field of battle. Gas causes less suffering than wounds produced by other weapons. Chlorine, the first gas used, in heavy concentrations is a powerful irritant and causes strangulation and considerable pain. When used against unprotected troops it will cause a high mortality. A high concentration of phosgene or chlorpicrin causes instant collapse with no suffering. The pain caused by mustard is always delayed and depends upon the concentration, parts affected and the length of exposure. According to the report of the Surgeon General, United States Army, for 1920, 258,338 men were injured during the war. Of these, 34,249 died on the field of battle and 13,691 died in hospitals. There were admitted to the hospitals (this does not include the marines) 224,089. Of this number 70,552 or 27.3 per cent were suffering from gas alone. Of the 70,552 gas cases, only 1,221 died. Of the 153,537 admitted to the hospitals suffering from bullets, high explosives and other methods of war, except gas, 12,470 died. Of these killed on the field of battle, we know that very few, probably under 200, were from gas, since concentrations of gas sufficient to kill within twelve hours were seldom ob-

tained. If we assume that 200 died from gas on the field of battle, the total deaths from gas would be 1,441 out of 70,752 or less than 2 per cent. In like manner, of the 187,586 injured by bullets, high explosives and similar methods, 46,449, or more than 24 per cent died. This is evidence that the men injured by gas alone on the field of battle had twelve times as many chances for recovery as those wounded with bullets and high explosives. If as many died from gas as from high explosives and bullets, we would have 15,600 more dead and about 3,000 more crippled.

OTHER comparisons are still more striking. On page 21 of the above report we are told that 86 men were totally blinded in the war, 44 were partially blinded in both eyes, and 644 were blinded in one eye. These figures include eyes destroyed or those in which sight was lost. Of the gassed patients, four were blinded in both eyes and 25 in one eye, a total of 29. These 29 were 3.85 per cent of all those suffering blindness in one or both eyes. Thus, other methods of warfare were responsible for twenty-five times as many blinded as was gas.

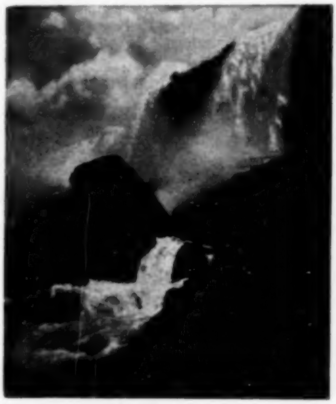
Of the 78,663 casualties occurring in the German Army from gas, 2,280 or 2.9 per cent died, while of the 4,168,116 casualties produced by other weapons, 1,806,275, or 43 per cent died, which shows that the gas casualties in the German Army had fifteen times more chance of living than had those wounded by other weapons. Of the 180,981 gas casualties occurring in the British Army, 6,062, or 3.3 per cent died, and of the 1,908,810 casualties produced by other weapons, 700,137 or 36.6 per cent died.

In order to ascertain whether there is any reason to suspect any other after-effects as a result of gassing, the Office of the Chief of Chemical Warfare Service sent 3,500 letters to experienced physicians in this country and Europe, with questionnaires to be filled in and returned. In addition, the *Journal of the American Medical Association* published these questionnaires with a request that physicians fill them out and send them to the Chemical Warfare Service. Replies showed that the great majority of physicians answering were of the opinion that there were no after-effects resulting from exposure to warfare gases.

The people of the United States look to the efficiency of their Army and Navy for protection in time of war. There can be no doubt that chemical warfare aggressively pursued is an astoundingly efficient, casualty-producing agent. Gas kills about two per cent of its casualties, the rest recover to resume their places in life as an asset, not a liability, to society for gas leaves no human wreckage and helplessness. When it

is realized that deaths from gas are at least lower than one to ten compared with other weapons, that permanent disabilities are practically negligible, and that after-effects are of no moment, it must be appreciated that chemical warfare, as a method of waging war compared with other methods, must be commended instead of being condemned.

Annual Meeting, May 9-10, 1936



THE Annual Meeting of THE AMERICAN INSTITUTE OF CHEMISTS will be held at Buffalo, N. Y., on May ninth and tenth.

Niagara Falls, nearby, will be visited by those who know its thundering, majestic splendor, as well as by those who will thrill to it for the first time. To the chemist, Niagara Falls are more than magnificent scenery. The transformed energy of the falling water has made this section the chemical center of America.

The Falls were discovered by the crusading French missionary, Father Louis Hennepin, in 1678. Traders, exchanging baubles for the Indians' beaver skins, induced English expeditions. The French defended their new lands by building forts to repel the invaders. These forts were captured and recaptured by the English and Americans until the British defeat in 1812. Colonization and industrial development took place rapidly, building up an American commerce which is greatly indebted to the manufactured products resulting from the power of Niagara and the practical application of that power by scientists.

New York Chapter Meeting

A meeting of the New York Chapter of THE AMERICAN INSTITUTE OF CHEMISTS will be held on February 14th. Dr. D. D. Berolzheimer, F.A.I.C., will address the meeting on "Searching Chemical and Allied Literature."

BOOKS

SUCCESSFUL BREWING. BY MORRIS A. POZEN, F.A.I.C. *Brewery Age Publishing Co.* Chicago, Ill. $2.50.

BREWING, like all of mankind's older arts, has been slower to adopt modern scientific control than have some of our younger industries. Nevertheless, many successful applications have been made of modern chemical theory in the art of brewing.

Dr. Pozen discusses the questions of hydrogen-ion control, oxidation and reduction potentials and others. His chapter on enzyme action represents a very successful popularization of a little-understood topic.

From a purely technical point of view, the chapters on "Why People Drink Beer," "Is Beer Fattening?" and "Beer Advertising" might possibly have been omitted, but, as showing the variety of matters which must be considered by a technologist in any field, they are well worth consideration.

The book is clearly printed on heavy paper, well bound and should prove of interest both to all members of the Beer Drinkers' Union as well as to technicians in the brewing industry. K. M. H.

HANDBOOK OF CHEMISTRY AND PHYSICS. Edited by CHARLES D. HODGMAN. 20th Edition. *Chemical Rubber Publishing Company.* Cleveland, Ohio. $6.00.

THIS handbook, which has grown through successive revisions from a little manual of about two hundred pages to almost two thousand pages, makes it a point to introduce some major changes in each successive edition.

In the present edition, the major change is in the table of "Physical Constants of Organic Compounds." In place of the previous tabular form, the section now includes descriptions of almost nine thousand named compounds, with cross-references, since the nomenclature has been revised in accordance with the rules of the International Union. Furthermore, each compound has collected the data regarding it in the form of a few lines to a paragraph, after the manner of a dictionary. It would appear at first sight that this form might probably be not so convenient for comparative purposes as the older tabular form, but it is possible that this may be more than compensated for by the complete-

ness of the table, both in respect to number of compounds and data respecting each.

In addition, the sections on amino acids, X-ray spectra, magneto-optic rotation, colorimetry and photometry have been enlarged and revised up to date. As always, the Handbook is one which is almost indispensable.

K. M. H.

Echoes from the Exposition

"Between the dark and the daylight,
When the night is beginning to lower,
There comes a pause in the day's occupation,
Which is known as . . . ."

Well, Longfellow had another name for it, but to this chemist it was "dog-watch at the chemical show."

The succession of watchers at THE AMERICAN INSTITUTE OF CHEMISTS' booth could well feel that they were on the deck of a ship, what with the gale that blew down the stairs and right on down one's back. It was fun, though; and some day we all ought to get together to offer a prize for the Best Answer to the Dumbest Question Asked during the Week, and especially to compile notes on the best technique developed for discouraging the non-serious sample-snatcher.

This watch-dog found amusement in drawing out those whose conversation showed that they believe chemistry to be a "recipe racket." You'd be surprised at how many of these there are!

"Professional chemists? What do you mean—a 'professional chemist?'" The INSTITUTE's definition of a professional chemist was reduced to its simplest terms; and its objectives were presented briefly.

"Aw, I don't know anything about that. But I'm a chemist. Sure I have the . . . . . Chemical Company, over in Newark."

"What do you make?"

"Proxide for the beauty business. You know they gotta use a certain 18-volume proxide for hair dyein'. Well, I make that for 'em. . . . .(two methods of manufacture outlined). . . .Of course, what I make burns more than the other . . ." (the watch-dog's eyes glinted).

"Don't you think it's important in hair dyeing that the peroxide should not burn the scalp?"

"Sure, I suppose it is; but you can't make medicinal proxide over there without a chemist's license."

"Oh, and haven't you one? I thought you said you are a chemist."

"Well, I'm what you'd call a 'practical chemist,' y'understand? I'm a specialist in cosmetics." (The watch-dog's ears tingled.)

"Where did you study your cosmetic chemistry? We have many inquiries from students and others who want to go into that kind of work."

"Well, I am entirely self-taught. The only chemistry I ever studied was in high school, but you know, I got interested in side-lines through those books like . . . .'s. Gee, you can learn a lot in those books, if you're clever enough to use it. I studied them up and got myself a good job."

"How interesting! And where did you get the experience that led you into this peroxide business?"

"Well, I sorta got the hang of the whole industry while I was working on face powders at H. . . .'s. I learned about all I could there, so then I went to a varnish company in Jersey. You know they use a lot of lacquer in nail pol-

ishes nowadays. That was a wonderful experience. And I just got talking to some one one day about the difficulties they have with their proxides in hair-dyein', and the idea come to me—just like that'! I'd start in for myself and make that special stuff for them."

By this time, with all these juicy tidbits being cast about, the watch-dog was licking its chops and simply purring. . . . A few more questions and answers. . . .

"Well, so long! Of course, I couldn't join your INSTITUTE, but I think it is an awful good thing. There sure ought to be some way to protect us legitimate manufacturers from the fellows that just go around peddling a hair tonic or somethin' that they bummed from somebody else. I wish you good luck."

This is of that large number of phenomena that must be seen and heard to be believed. How much longer are the real chemists going to stand for it? Help THE AMERICAN INSTITUTE OF CHEMISTS to rid our profession of such parasites!

FIDO

Chemists Abroad

By James N. Taylor, F.A.I.C.

PROFESSOR W. H. ROBERTS, City Analyst to the Liverpool Corporation, in submitting the toast of "The Profession of Chemistry" at the Annual Dinner of the British Association of Chemists held at the Adelphi Hotel, Liverpool, on Saturday, November 30, 1935, alluded to its progress in the last sixty years. In the year 1878, the membership of the Institute of Chemistry was 285. Now it was over 6,000 and that number did not include all the real chemists in the country.

The profession might be divided into, roughly, three classes: academic, analytical and industrial. As time went on there became a division between the academic and the analytical chemists. In his opinion, there was no reason why there should not be complete coöperation between the three bodies comprising the profession of chemistry. It appeared to him that the days of the consulting chemist, as such, were rapidly coming to a close, as nearly all the big industrial undertakings had founded their own research laboratories. If the various societies would sink their individual differences and coöperate more, the profession would be a far bigger force and influence than ever it had been in the past. The profession of chemistry was really the back-bone of everything in the country. Professor Roberts indicated how practically every industry placed reliance on the work of the chemist.—*The Oil and Colour Trades Journal.*

THE MODEST beginnings and slow growth of THE AMERICAN INSTITUTE OF CHEMISTS finds a parallel in the Institute of Chemistry.

THE SUPREME COURT of Ontario, through a recent decision rendered by Mr. Justice Kingstone, has dismissed a motion to compel the granting of membership in the Ontario Association of Professional Engineers.

The case arose through the application of a Canadian engineer residing in the United States who desired to practice his profession there. In order to do so, he was required to show that he was a registered member of the Provincial Association in Canada, where he had resided formerly. Having neglected to join, prior to his going to the United States, he made application to the Ontario Association after his departure. The Court upheld the decision of the Ontario Association, which, it is understood, refused his

application on the ground that he was no longer a resident of that Province.—*Canadian Chemistry and Metallurgy.*

WAGES IN THE German chemical industry were made the subject of an official inquiry conducted in June, 1934. The report shows slight changes in wage levels from the 1932 low and inasmuch as no noteworthy changes have occurred since, the data can be accepted as accurately reflecting current conditions.

The average gross wage was 0.841 mark per hour. The peak wage was earned by skilled hand-workers, 1.044 mark per hour; followed by male factory workers, 0.842 mark; and female factory workers, 0.526 mark. Within the group of skilled hand-workers, those paid on a bonus basis (as distinguished from the two other wage forms, namely, time and piece) showed the highest average earnings, or 1.085 mark per hour, those working on a piece basis closely following, however, with 1.079 mark. The average wage payments mentioned include supplements above the prescribed wage-tariff, of 0.22 mark per hour for bonuses, overtime, etc., and 0.17 mark per hour for family status, wife, dependents, etc. On the other hand, they exclude deductions, averaging 0.109 mark per hour, or 12.9 per cent of the gross wages, payable for taxes and to the social-insurance funds, taxes taking 0.034 mark and social insurance 0.075 mark, per hour.

The total number of workers (wage-earners and salaried employees combined) connected with the German chemical industry increased markedly, or by 27 per cent, from the 1932 low level to 1934, rising from 280,133 in 1932, to 298,303 in 1933, and to 355,287 in 1934, as indicated by compilations based upon average employment figures of social-insured workers. The following table shows the increase in persons accredited to the German chemical industry in the last two years, segregated according to the two basic groups of plant and sales personnel:

Year	Plant Wage-Earners and Salaried Employees	Sales Employees	Totals
1932	234,933	45,200	280,133
1933	253,191	45,112	298,303
1934	303,403	51,884	355,287

(Consul Sydney B. Redecker, Frankfort-on-Main.)

DR. B. HOLMES of the Pest Control Department, Imperial Chemical Industries, Ltd., has contributed to the *I. C. I. Magazine* a very interesting and readable account of his recent visit to the United States.

FOR THE past year the efforts of the Office International de Chimie at Paris have been directed toward centralization of chemical information with a view to facilitating research in this branch of science. At a recent meeting of the permanent committee of the Office, the work accomplished during the past twelve months was reviewed and plans for an extensive future campaign were discussed.

Outstanding among the accomplishments of recent months was the publication of an international index of centers of chemical information, listing the various organizations from which scientific, technical and economic data on chemical questions may be obtained. Supplementing this publication, an index of chemical publications is under preparation. The use of motion pictures as a means of documentation was discussed in detail, and it is expected that developments in this field will prove invaluable to scientists.—*Assistant Trade Commissioner, Earle C. Taylor, Paris.*

COUNCIL

December Meeting

THE one hundred and twenty-seventh meeting of the Council of THE AMERICAN INSTITUTE OF CHEMISTS was held at the Chemists' Club, 52 East 41st Street, New York, N. Y., on December 19, 1935, at 5:30 P. M. President M. L. Crossley presided. The following officers and councilors were present: Messrs. R. A. Baker, F. G. Breyer, M. L. Crossley, H. S. Neiman, L. Van Doren, F. W. Zons and Miss F. E. Wall. Dr. Max Trumper was present as a representative of the Pennsylvania Chapter. Miss V. F. Kimball was also present.

The minutes of the previous meeting were approved. The Treasurer's report, showing a cash balance of $495.93, was read and ordered filed.

The following new members were elected:

FELLOWS

JESSE L. BULLOCK, *Associate Professor,* Clark University, Worcester, Mass.

MARSTON L. HAMLIN, *Patent Attorney,* The Barrett Company, 40 Rector Street, New York, N. Y.

JOEL SMITH HARRIS, *Research Chemist,* Stokes and Smith, Philadelphia, Penna.

RAOUL J. STONER, *Assistant Chemist,* Employed by President of Borough of Manhattan, Room 2125, Municipal Building, New York, N. Y.

WILBUR O. TEETERS, *General Manager,* Hoke, Inc., 122 Fifth Avenue, New York, N. Y.

ASSOCIATES

EMERSON H. CONNER, 805 Fifth Avenue, Tuscaloosa, Alabama.

WILLIAM F. FILBERT, *Research Chemist,* E. I. du Pont de Nemours & Company, Eastern Laboratory, Lock Box B, Gibbstown, N. J.

JUNIOR

MICHAEL R. DE CARLO, *Technician* in

Chemistry Laboratory, Army Medical School, Washington, D. C.

On motion made and seconded, Ferdinand F. E. Kopecky was raised from Associate to Fellow.

On motion made and seconded, the President was requested to appoint a committee to take care of preparations for the annual meeting to be held in Buffalo. On motion made and seconded, the suggestion of the Niagara Chapter that the Statler Hotel be made a nominal headquarters for the annual meeting was approved.

On motion made and seconded, the Niagara Chapter's request that its territory be extended to include such cities as Rochester, Syracuse, etc., was approved.

On motion made and seconded, the Council voted to adopt a resolution relative to the Copeland Bill's omission of chemists in its definition of "those qualified to give expert opinion."

There being no further business, adjournment was taken.

Our New Members

Jesse L. Bullock, F.A.I.C., received the Ph.D. degree from Harvard. His specialty is reaction kinetics, and he holds the position of associate professor at Clark University, Worcester, Mass.

Emerson H. Conner, A.A.I.C., studied at the University of Cincinnati and has the M.S. degree from the University of Alabama. He is interested especially in petroleum cracking; the production of diphenyl by the pyrolysis of benzene; and hydrocarbons. His address is Tuscaloosa, Alabama.

Michael R. De Carlo, J.A.I.C., holds the B.S. degree from the College of William and Mary and has studied at George Washington University. Specializing in physiological chemistry, he is technician in the Chemistry Laboratory of the Army Medical School, Washington, D. C.

William F. Filbert, A.A.I.C., has the B.S. degree from Dakota Wesleyan University, and the Ph.D. degree from the University of Minnesota. He has several patents pending. His research has been mainly on explosives. He is employed as research chemist by E. I. du Pont de Nemours & Company, Eastern Laboratory, Gibbstown, N. J.

Marston L. Hamlin, F.A.I.C., studied at Amherst, has the Ph.D. degree from Columbia, and did graduate work at the University of Strassburg. Among his publications is "Chemical Resistance of Engineering Materials" written in collaboration with F. M. Turner. Mr. Hamlin holds many patents and specializes in organic chemistry, foods, tobacco, tar products and bitumens. He is patent attorney for the Barrett Company, New York, N. Y.

Joel S. Harris, F.A.I.C., studied at Drexel Institute. With a wide background of varied industrial experience, he is now research chemist on synthetic resins for Stokes and Smith, Philadelphia, Penna.

Raoul J. Stoner, F.A.I.C., received the B.S. and Ch.E. degrees from Brook-

lyn Polytechnic Institute, and the J.D. degree from the School of Law of New York University. Specializing in asphalt chemistry and sanitation, he is employed by the President of the Borough of Manhattan as assistant chemist, Municipal Building, New York, N. Y.

Wilbur O. Teeters, F.A.I.C., obtained the B.S. degree from Butler University and the Ph.D. degree from New York University. He is general manager of Hoke, Inc., 122 Fifth Avenue, New York, N. Y.

Archie J. Weith, F.A.I.C., received the M.S. degree from the University of Kansas. He holds many patents on phenolic condensation products, and is associate director of research of the Bakelite Corporation, Bloomfield, N. J.

NEWS

The American Institute of Chemical Engineers elected the following officers for 1936: *President*, Dr. Martin H. Ittner, *Vice-president*, Fred C. Zeisberg; *Secretary*, Frederic J. LeMaistre; *Treasurer*, Charles R. DeLong; *Directors:* Edward Bartow, Gustav Egloff, F.A.I.C., Albert B. Newman, James J. Vail.

The American Chemical Society elected the following officers for 1936: *President-elect*, E. R. Weidlein, F.A.I.C., director of Mellon Institute of Industrial Research; *Councilors-at-Large:* James B. Conant, president, Harvard University; Gustav Egloff, F.A.I.C., chief chemist, Universal Oil Products Company; John Johnston, director of research, U. S. Steel Corporation; R. Norris Shreve, professor of chemical engineering, Purdue University. *Directors:* First District, Arthur J. Hill, F.A.I.C., chairman, Department of Chemistry, Yale University. Third District, Frank C. Whitmore, dean, School of Chemistry and Physics, Pennsylvania State College. *Director-at-Large:* Robert E. Wilson, vice-chairman, Pan American Petroleum and Transport Company.

J. S. McHargue, F.A.I.C., head of the Department of Chemistry, Kentucky Agricultural Experiment Station, Lexington, Ky., received a $5,000.00 award of the American Society of Agronomy for his researches on the effects of manganese, copper, zinc, boron and iodine, on the normal growth and metabolism of plants and animals. Presentation of the award was made during the American Society of Agronomy's annual meeting at Chicago.

Elmer C. Bertolet, F.A.I.C., head of the Department of Chemistry and Dyeing of the Philadelphia Textile School, was elected vice-president of the American Association of Textile Chemists and Colorists at its annual meeting held at Chattanooga, Tenn., December 6th to 7th.

New Year's Resolution: Every member of The American Institute of Chemists shall bring in a new member.

Low Melting Glass

Ordinary soft lead glass, such as is used in tubing form in the laboratories, is, of course, low melting in the sense that it softens and may be worked somewhat below a red heat. But most of us do not possess sufficient skill to use it in making sealed joints, T-tubes, etc., at these temperatures and we must perforce relegate these matters to the professional glass blower or do without.

I have been endeavoring to supply this want. For glassy compositions we are of course practically restricted to silicates and borates but unfortunately none of the metallic oxides give silicates or borates lower melting than lead glass. I was therefore compelled to try the organic esters of these acids, most of which are more or less glassy, and I finally hit upon phenol borate as possessing the required qualities.

Boric acid, which should be the fused anhydrous variety, melts readily with phenol (C_6H_5OH) to form glassy compositions. The character of the product depends somewhat upon the ratio of B_2O_3 to C_6H_5OH, but in a general way it may be said that most ratios give clear glassy products, softening and readily worked at temperatures as low as 100° C. They are quite viscous and the usual glass-joining and glass-blowing operations may be performed at this temperature. Warmed rods and tubes readily adhere to each other and without much skill or labor perfect "blown joints" may be obtained. The glass is colorless, if the materials used were pure. The various cresols may be used in lieu of the phenol.

The new glass has many virtues in addition to its low softening point, and but one fault: it will not stand exposure to water or air without decomposition. Otherwise it is perfect.—K. P. McElroy in *Journal of Ingenuous or Almost Chemistry.*

"Graduate student, quite imprudent,
How does your research go?"
"Absolute Nitrogens, Carbons and
Hydrogens,
Failures—all in a row."

Inscription on the Memorial Monument to
Dr. William Macneven
(1763-1841)
in St. Paul's Churchyard,
New York, N. Y.

As Professor of Chemistry in the
Medical Schools of This City
He Was One of the First and Ablest
Teachers in America.
Of Those Discoveries and Doctrines
Which Raised Chemistry into a
Science and Prepared It for
Future Illimitable Extension
His Calm Deportment
and Habitual Prudence
Covered the Warmest and
Most Generous Affections
Shown as Well in the Relations
of Private Life
As in His Ardent Patriotism Alike
toward the Country of His Birth
and That of His Adoption

"1646. Athanasius Kircher, a Jesuit of the seventeenth century, boasted of having paper, among other things, made of asbestos."—*Munsell: Chronology of Paper-making*.

Dr. Lawrence W. Bass, F.A.I.C., has been elected Chairman, and Dr. D. P. Morgan, F.A.I.C., has been elected Vice-chairman of the New York Section of the American Chemical Society for 1936.

Frederick Kenney, F.A.I.C., has been appointed a member of the Advisory Board of St. Joseph Hospital, Far Rockaway, N. Y., for the year 1936.

Science Nibble

Sheep sicken and die when put to graze on land in which there is no cobalt, it has been learned in Australia. Only a trace of the element is necessary for the health of the animals.—*The Pathfinder*.

Joseph Francis Xavier at the Round Table at The Chemists' Club: "All roads lead to Rum."

Edward R. Weidlein, F.A.I.C., has been chosen as President-elect of the American Chemical Society to serve as President in 1937.

Marston T. Bogert, F.A.I.C., made the presentation of the Perkin Medal to Professor Warren K. Lewis at the joint meeting of the Chemical Societies held at The Chemists' Club, New York, on January 10th.

The following Fellows of THE AMERICAN INSTITUTE OF CHEMISTS presented papers at the sixth national Symposium on Organic Chemistry of the American Chemical Society, December 30th to January 1st: Marston T. Bogert, Benjamin T. Brooks, Arthur J. Hill.

The Carpenter suggests that F. W. Zons, F.A.I.C., could make good use of a portrait camera equipped with a name-recording device. Maybe Santa Claus will give him one this coming Christmas, in time to use for the January, 1937, issue of *The Indicator*.

A druggist who came from Paree
Drank overmuch eau de vie,
One day, so they think,
Took the wrong stuff to drink,
And the label read HNO_3.

From a Reader

DEAR WALRUS:

Chemical poetry is fine, but please do not limit your contribs to limericks. Let's have quatrains, triolets, sonnets or whatever they can compose that conforms to some rules of versification. Lord, Lord, my four eyes simply ache from some of the terrible jargon that has been published since that snoring gentlemen from Calcutta first made his appearance in one of the other chemical periodicals.

EFFIE W.